

STREAM CROSSING (TYPE I AND II):

Description:

This work consists of the construction and maintenance of culverted (Type I) and at-grade (Type II) permanent stream crossings.

The quantity of stream crossings to be installed will be affected by the actual conditions that occur during the construction of the project. The quantity of stream crossings may be increased, decreased, or eliminated entirely as directed. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

Materials

Item	Section
Aggregate Base Course (ABC)	1005
Plain Riprap, Class __	1042-1
Filter Fabric for Drainage, Type 2	1056
Pipe Culverts	310

Construction Methods

Stream crossings shall be constructed according to the stream crossing detail shown on the plans or as directed.

(A) Type I Crossings

Type I crossings are constructed using pipe culverts as specified on the plans. Culverts should be installed in accordance with NCDOT specifications. For culverts up to 48" (1219 mm) diameter, 20 percent of the pipe should be buried beneath the streambed. For culverts above 48" (1219 mm) diameter, 1 ft. (0.3 m) of the pipe should be buried beneath the streambed. Stream crossing should be installed to provide positive drainage in all directions. For grade control purposes, a rock cross vane shall be installed just downstream of each stream crossing as shown on the plans or as directed. The streambed between the outlet of the culvert and the head of the cross vane should be plated with Class __ riprap as shown on the plans or as directed. Class __ riprap should also be installed on the crossing road sideslopes as shown on the plans.

(B) Type II Crossings

Type II crossings are constructed as at-grade crossings using a broad stone weir as specified on the plans. Stream crossing should be installed to provide positive drainage in all directions. For grade control purposes, a rock cross vane shall be installed just downstream of each stream crossing as shown on the plans or as directed. The streambed between the downstream end of the stone weir and the head of the cross vane should be

plated with Class __ riprap as shown on the plans or as directed. Class __ riprap should also be installed on the crossing road sideslopes as shown on the plans.

Measurement and Payment

Aggregate Base Course will be measured and paid as the actual number of tons (metric tons) that have been incorporated into the work, or have been delivered to and stockpiled on the project as directed. Aggregate base course that has been stockpiled will not be measured a second time.

Plain Riprap, Class __ will be measured and paid for in accordance with Subarticles 876-5(B) and 876-6(B) of the *Standard Specifications*.

Filter Fabric for Drainage will be measured and paid for in accordance with Subarticles 876-5(C) and 876-6(C) of the *Standard Specifications*.

Pipe Culverts will be measured and paid for in accordance with Articles 310-6 and 310-7 of the *Standard Specifications*.

Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to construct the stream crossings.